

Version with markings to show changes made

1. (Amended) A [F]frequency separating filter having a deep-pass branch [(8)] for low frequency signals, particularly of analog communication systems, and a high-pass branch [(7)] for high frequency signals of digital communication systems, with multiple inductive components [(11, 14)] with magnetic cores, [characterized in that] wherein the high-pass branch [(7)] comprises at least one component [(11, 14)] with a magnetic core made of an amorphous or nanocrystalline alloy.

2. (Amended) The [F]frequency separating filter according to claim 1, [characterized in that] wherein the alloy has the composition $\text{Co}_a(\text{Fe}_{1-c}\text{Mn}_c)_b\text{Ni}_d\text{M}_e\text{Si}_x\text{B}_y\text{C}_z$, with M indicating one or more elements from the group Nb, Mo, Ta, Cr, W, Ge, and P and $a+b+d+e+x+y+z = 100$, with

Co: $a = 40 - 82 \text{ at\%}$,

Fe+Mn: $b = 3 - 10 \text{ at\%}$,

Mn/Fe: $c = 0 - 1$,

Ni: $d = 0 - 30 \text{ at\%}$,

M: $e = 0 - 5 \text{ at\%}$,

Si: $x = 0 - 17 \text{ at\%}$,

B: $y = 8 - 26 \text{ at\%}$,

C: $z = 0 - 3 \text{ at\%}$,

$15 < e+x+y+z < 30$.

3. (Amended) The [F]frequency separating filter according to claim 2, [characterized in that] wherein the following relationships apply:

Co: $a = 50 - 82 \text{ at\%}$,

Fe+Mn: $b = 3 - 10 \text{ at\%}$,

Mn/Fe: $c = 0 - 0.5$,

Ni: $d = 0 - 20 \text{ at\%}$,

M: $e = 0 - 3 \text{ at\%}$,

Si: $x = 1 - 17 \text{ at\%}$,

B: $y = 8 - 20 \text{ at\%}$,

C: $z = 0 - 3 \text{ at\%}$,

with $18 < e+x+y+z < 25$.

4. (Amended) The [F]frequency separating filter according to claim 1,

[characterized in that] wherein

the alloy has the composition $\text{Fe}_a\text{Cu}_c\text{M}_f\text{Si}_d\text{B}_e$, with M indicating an element from the group

Nb, W, Ta, Zr, Hf, Ti, Mo, or a combination of these and $a + c + f + d + e = 100\%$, with

Fe: $a = 100\% - c - f - d - e$,

Cu: $c = 0.5 - 2 \text{ at\%}$,

M: $f = 1 - 5 \text{ at\%}$,

Si: $d = 6.5 - 18 \text{ at\%}$,

B: $e = 5 - 14 \text{ at\%}$,

with $d + e > 18 \text{ at\%}$.

5. (Amended) The [F]frequency separating filter according to claim 4,

[characterized in that] wherein

the following relationships apply:

Cu: $c = 0.8 - 1.2 \text{ at\%}$,

M: $f = 2 - 3 \text{ at\%}$,

Si: $d = 14 - 17 \text{ at\%}$,

B: $e = 5 - 14 \text{ at\%}$,

with $d + e = 22 - 24 \text{ at\%}$.

6. (Amended) The [F]frequency separating filter according to claim 1,
[characterized in that] wherein

the alloy has the composition $\text{Fe}_x\text{Zr}_y\text{Nb}_z\text{B}_v\text{Cu}_w$, with $x + y + z + v + w = 100$ at%, with

Fe: $x = 100 \text{ at\%} - y - z - v - w$,

Zr: $y = 2 - 5 \text{ at\%}$,

Nb: $z = 2 - 5 \text{ at\%}$,

B: $v = 5 - 9 \text{ at\%}$,

Cu: $w = 0.5 - 1.5 \text{ at\%}$,

with $y + z > 5 \text{ at\%}$ and $y + z + v > 11 \text{ at\%}$.

7. (Amended) The [F]frequency separating filter according to claim 6,
[characterized in that] wherein

the following relationships apply:

Fe: $x = 83 - 86 \text{ at\%}$,

Zr: $y = 3 - 4 \text{ at\%}$,

Nb: $z = 3 - 4 \text{ at\%}$,

B: $v = 5 - 9 \text{ at\%}$,

Cu: $w = 1 \text{ at\%}$,

with $y + z = 6 - 7 \text{ at\%}$,

and $y + z + v > 12 - 16 \text{ at\%}$.

8. (Amended) The [F]frequency separating filter according to claim 1,
[characterized in that] wherein

the alloy has the composition $\text{Fe}_x\text{M}_y\text{B}_z\text{Cu}_w$, with M indicating an element from the group Zr, Hf, Nb and $x + y + z + w = 100$ at%, with

Fe: $x = 100 \text{ at\%} - y - z - w$,

M: $y = 6 - 8 \text{ at\%}$,

B: $z = 3 - 9 \text{ at\%}$,

Cu: $w = 0 - 1.5 \text{ at\%}$.

9. (Amended) The [F]frequency separating filter according to claim 8,
[characterized in that] wherein
the following relationships apply:

Fe: $x = 83 - 91 \text{ at\%}$,

M: $y = 7 \text{ at\%}$,

B: $z = 3 - 9 \text{ at\%}$,

Cu: $w = 0 - 1.5 \text{ at\%}$.

10. (Amended) The [F]frequency separating filter according to claim 1,
[characterized in that] wherein
the alloy has the composition $(\text{Fe}_{0.98}\text{Co}_{0.02})_{90-x}\text{Zr}_7\text{B}_{2+x}\text{Cu}_1$, with $x = 0 - 3$, with the residual alloy
component Co able to be replaced by Ni with appropriate equalization.

11. (Amended) The [F]frequency separating filter according to claim 10,
[characterized in that] wherein
 $x = 0$.

12. (Amended) The [F]frequency separating filter according to claim 4,
[characterized in that] wherein
the alloy also has an element which is Co or Ni.

13. (Amended) The [F]frequency separating filter according to claim 12,
[characterized in that] wherein
the alloy also has Co_b with
 $\text{Co: } b = 0 - 15 \text{ at\%}$.

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PRELIMINARY AMENDMENT

14. (Amended) The [F]frequency separating filter according to claim 5,
[characterized in that] wherein
the alloy also has Co_b with
Co: b = 0 – 0.5 at%.

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